

Amendments to the Claims:

Listing of Claims:

Claim 1 (original). A method for coding transform coefficients in picture and/or video coders and decoders

wherein

for blocks of (video) pictures containing significant transform coefficients, the coding of transform coefficients takes place in such a way that, for each block,

- in a scan process, the positions of significant transform coefficients in the block and subsequently,
- in a reverse scan order - starting with the last significant transform coefficients within the block - the values (levels) of the significant transform coefficients are determined and coded.

Claim 2 (original). The method according to claim 1,

wherein

each significant transform coefficient of the block other than the last transform coefficient of the block is characterized by a one-bit symbol.

Claim 3 (original). The method according to claim 1,

wherein

for each significant transform coefficient, the sign is indicated by a one-bit symbol (SIGN) and the magnitude is indicated by a binary-coded symbol (ABS).

Claim 4 (original). The method according to claim 1,

wherein

the magnitude is indicated by a symbol (ABS) in unary binarization or by a symbol (ABS) having a prefix part and a suffix part, wherein the prefix part consists of ones and the suffix part is coded in a 0th order exp-golomb code.

Claim 5 (original). The method according to claim 1,

wherein

blocks containing significant transform coefficients are characterized by a one-bit symbol CBP4 in connection with further syntax elements, such as, for example, CBP or macro block mode.

Claim 6 (original). The method according to claim 1,

wherein

by transferring a one-bit symbol (SIG) for each coefficient of a block and a one-bit symbol (LAST) for each significant coefficient of a block, a significance mapping is coded, wherein the transfer takes place in a scan order, (SIG) serves for identifying significant coefficients and (LAST) indicates whether there are further significant transform coefficients in the block.

Claim 7 (original). The method according to claim 6,

wherein

modeling

- for the one-bit symbol CBP4,

Appl.No.10/727,802

Preliminary Amdt. dated December 2, 2004

- for coding the significance mapping and/or
- for coding the coefficient magnitudes

takes place in a context-dependent way.

Claim 8 (original). The method according to claim 6,

wherein

no significance information (SIG, LAST) is transferred for the last scan position of a block.

Claim 9 (original). The method according to claim 1,

wherein

block types of transform coefficients having comparable statistics are summarized to block categories.

Claim 10 (original). An arrangement having at least one processor and/or chip formed such that a method for coding transform coefficients in picture and/or video coders and decoders can be performed, wherein

for blocks of (video) pictures containing significant transform coefficients, the coding of transform coefficients takes place in such a way that, for each block,

- in a scan process, the positions of significant transform coefficients in the block and subsequently,
- in a reverse scan order - starting with the last significant transform coefficients within the block - the values (levels) of the significant transform coefficients are determined and coded.

Claim 11 (original). A computer program enabling a computer, after having been loaded into the memory of the computer, to perform a method for coding transform coefficients in picture and/or video coders and decoders, wherein

for blocks of (video) pictures containing significant transform coefficients, the coding of transform coefficients takes place in such a way that, for each block,

- in a scan process, the positions of significant transform coefficients in the block and subsequently,
- in a reverse scan order - starting with the last significant transform coefficients within the block - the values (levels) of the significant transform coefficients are determined and coded.

Claim 12 (original). A computer-readable storage medium on which a program is stored, enabling a computer, after having been loaded into the memory of the computer, to perform a method for coding transform coefficients in picture and/or video coders and decoders, wherein

for blocks of (video) pictures containing significant transform coefficients, the coding of transform coefficients takes place in such a way that, for each block,

- in a scan process, the positions of significant transform coefficients in the block and subsequently,

Appl.No.10/727,802

Preliminary Amdt. dated December 2, 2004

- in a reverse scan order - starting with the last significant transform coefficients within the block - the values (levels) of the significant transform coefficients are determined and coded.

Claim 13 (original). A method wherein a computer program according to claim 11 is downloaded from an electronic data network, such as, for example, the Internet, to data processing means connected to the data network.

Claims 14-23 (canceled).

Claim 24 (new). A method for coding transform coefficients in picture and/or video coders and decoders

wherein

for blocks of (video) pictures containing transform coefficients being unequal to zero, a coding of transform coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map specifying the positions of transform coefficients

being unequal to zero in the block in a scan order,  
and subsequently,

in a reverse scan order, starting with the last  
transform coefficient being unequal to zero within  
the block, the values (levels) of the transform  
coefficients being unequal to zero are coded.

Claim 25 (new). The method according to claim 24,

wherein

when coding the significance map, each transform  
coefficient being unequal to zero in the scan order is  
characterized by a first one-bit symbol (SIG) serving to  
characterize transform coefficients being unequal to zero,  
i.e. each transform coefficient being unequal to zero  
including the last transform coefficient being unequal to  
zero in the scan order if it is different from the last  
transform coefficient of the block in the scan order, or  
excluding the last transform coefficient being unequal to  
zero in the scan order if it is the last transform  
coefficient of the block in the scan order, and the last  
transform coefficient being unequal to zero is  
characterized by a second one-bit symbol (LAST) indicating



App'l. No. 10/727,802

Preliminary Amdt. dated December 2, 2004

that the respective transform coefficient being unequal to zero is the last transform coefficient being unequal to zero in the scan order if it is different from the last transform coefficient of the block in the scan order.

Claim 26 (new). The method according to claim 24,

wherein

for each transform coefficient being unequal to zero, the sign is indicated by a one-bit symbol (SIGN) and the magnitude is indicated by a binary-coded symbol (ABS) .

Claim 27 (new). The method according to claim 24,

wherein

the magnitude is indicated by a symbol (ABS) in unary binarization or by a symbol (ABS) having a prefix part and a suffix part, wherein the prefix part consists of ones and the suffix part is coded in a 0th order exp-golomb code.

Claim 28 (new). The method according to claim 24,

wherein

blocks containing transform coefficients being unequal to zero are characterized by a one-bit symbol (CBP4) in connection with further syntax elements, such as, for example, (CBP) or macro block mode.

Claim 29 (new). The method according to claim 24,

wherein

by transferring a one-bit symbol (SIG) for each coefficient of a block and a one-bit symbol (LAST) for each transform coefficient being unequal to zero of a block, the significance map is coded, wherein the transfer takes place in a scan order, (SIG) serves for identifying transform coefficients being unequal to zero and (LAST) indicates whether there are further transform coefficients being unequal to zero in the block.

Claim 30 (new). The method according to claim 28,

wherein

modeling

Appl.No.10/727,802

Preliminary Amdt. dated December 2, 2004

for the one-bit symbol (CBP4),  
for coding the significance map and/or  
for coding the coefficient magnitudes

takes place in a context-dependent way.

Claim 31 (new). The method according to claim 29,

wherein

no significance information (SIG, LAST) is transferred for  
the last scan position of a block.

Claim 32 (new). The method according to claim 24,

wherein

block types of transform coefficients having comparable  
statistics are summarized to block categories.

Claim 33 (new). An arrangement having at least one  
processor and/or chip formed such that a method for coding  
transform coefficients in picture and/or video coders and  
decoders can be performed, wherein

for blocks of (video) pictures containing transform coefficients being unequal to zero, a coding of transform coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map specifying the positions of transform coefficients being unequal to zero in the block in a scan order, and subsequently,

in a reverse scan order, starting with the last transform coefficient being unequal to zero within the block, the values (levels) of the transform coefficients being unequal to zero are coded.

Claim 34 (new). A computer program enabling a computer, after having been loaded into the memory of the computer, to perform a method for coding transform coefficients in picture and/or video coders and decoders, wherein

for blocks of (video) pictures containing transform coefficients being unequal to zero, a coding of transform coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map specifying the positions of transform coefficients being unequal to zero in the block in a scan order, and subsequently,

in the reverse scan order, starting with the last transform coefficient being unequal to zero within the block, the values (levels) of the transform coefficients being unequal to zero are coded.

Claim 35 (new). A computer-readable storage medium on which a program is stored, enabling a computer, after having been loaded into the memory of the computer, to perform a method for coding transform coefficients in picture and/or video coders and decoders, wherein

for blocks of (video) pictures containing transform coefficients being unequal to zero, a coding of transform coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map specifying the positions of transform coefficients being unequal to zero in the block in a scan order,

and subsequently,

in a reverse scan order, starting with the last transform coefficient being unequal to zero within the block, the values (levels) of the transform coefficients being unequal to zero are coded.

Claim 36 (new). A data stream representing a computer program enabling a computer, after having been loaded into the memory of the computer, to perform a method for coding transform coefficients in picture and/or video coders and decoders, wherein

for blocks of (video) pictures containing transform coefficients being unequal to zero, a coding of transform coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map specifying the positions of transform coefficients being unequal to zero in the block in a scan order, and subsequently,

in a reverse scan order, starting with the last transform coefficient being unequal to zero within

the block, the values (levels) of the transform coefficients being unequal to zero are coded.

Claim 37 (new). A method for decoding a coding of a significance map and a subsequent coding of values of transform coefficients being unequal to zero for blocks of (video) pictures containing transform coefficients being unequal to zero, the significance map specifying the positions of the transform coefficients being unequal to zero in a scan order, and the coding of values of transform coefficients being unequal to zero comprising coded values of the transform coefficients being unequal to zero in a reverse scan order -starting with the last transform coefficient being unequal to zero, comprising the following step:

decoding the coded values of transform coefficients being unequal to zero in the reverse scan order.

Claim 38 (new). A device for decoding a coding of a significance map and a subsequent coding of values of transform coefficients being unequal to zero for blocks of (video) pictures containing transform coefficients being unequal to zero, the significance map specifying the positions of the transform coefficients being unequal to

Appl.No.10/727,802

Preliminary Amdt. dated December 2, 2004

zero in a scan order, and the coding of values of transform coefficients being unequal to zero comprising coded values of the transform coefficients being unequal to zero in a reverse scan order - starting with the last transform coefficient being unequal to zero, comprising:

a decoder for decoding the coded values of transform coefficients being unequal to zero in the reverse scan order.